

**Before The
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

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In The Matter Of)	
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Skype Communications S.A.R.L.)	
)	
Petition to Confirm a Consumer's Right)	RM-11361
To Use Internet Communications Software and)	
Attach Devices to Wireless Networks)	
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To: The Commission

OPPOSITION OF QUALCOMM INCORPORATED

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SUMMARY

Skype's Petition is based on a series of erroneous assumptions about the wireless industry. As a result, the Petition provides no basis whatsoever for the Commission to grant the relief that Skype requests, which consists of a declaration that the Commission will extend its Carterfone decision to the wireless industry; initiation of a proceeding to evaluate wireless carrier practices in light of Carterfone, and creation of what Skype calls an "industry-led mechanism" to, in Skype's words, "ensure the openness of wireless networks." In seeking this relief, Skype mistakenly assumes that the wireless market in 2007 is analogous to the local, long distance, and equipment markets in 1968, when the Commission adopted Carterfone. Skype's Petition does not contain a word about the findings already made by the Commission on the actual state of competition today among wireless carriers.

In its most recent annual assessment of competition in the industry, issued in September 2006, the Commission found that there is "effective competition" in the wireless market; the market "continues to behave in a competitive manner;" "consumers continue to pressure carriers to compete on price and other terms and conditions of service by freely switching providers in response to differences in cost and quality of service;" "competitive pressure continues to drive carriers to introduce innovative pricing plans and service offerings, and to match the pricing and service innovations introduced by rival carriers;" mobile voice calls are "far less expensive on a per minute basis in the United States than in Western Europe and Japan;" and, "deployment of next-generation networks based on competing technological standards continues to be an important dimension of non-price rivalry in the U.S. mobile telecommunications market."¹

¹ Eleventh Report, Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services, 21 FCC Rcd 10947 (2006) ("Eleventh Report").

Skype asks the Commission to extend the monopoly-type regulation embodied in Carterfone to the wireless industry and to start a far ranging proceeding to consider imposing radical changes on the industry based on Skype's sketchy allegations of anti-competitive conduct, and yet, Skype does not even mention or deal with the Commission's core findings on the actual state of competition. The robust competition in the wireless industry, as verified by the Commission, ensures that consumers have a wide variety of wireless products and services from which to choose. Literally every day, new wireless applications, services and devices are brought to market. The short answer to Skype is that there is no need for the Commission to apply monopoly-type regulation or to start any proceeding because, as the Commission has found, consumers are today reaping the benefits of a robustly competitive wireless market. Indeed, the wireless market is a key driver of economic growth in the U.S., and there is no reason for the Commission to consider changing the policies which foster that growth.

Today's wireless market is the polar opposite of the local, long distance, and equipment markets of 1968, markets dominated entirely by one company, the pre-divestiture, vertically integrated monopoly AT&T. In 1968, when the Commission decided Carterfone, competition in telecommunications was unheard of in this country. Regulatory and judicial intervention was necessary in order for any competition even to have a chance to develop. That is completely different from the U.S. wireless market in 2007. There is no basis for the Commission to extend its monopoly-era Carterfone decision to today's robustly competitive wireless market, or to grant the other relief requested by Skype in light of the competitive nature of the market.

A second erroneous assumption by Skype is that state-of-the art wireless networks simply grow on trees in this competitive market. Skype does not mention, much less deal with, the huge ongoing capital expenditures that are necessary for the construction and operation of these

networks to keep up with the competition. The Commission cited an estimate that in 2005 alone, the U.S. wireless industry spent a total of \$25 billion on capital expenditures.² Carriers make these expenditures in reliance on a relatively stable regulatory environment, which they believe will allow them to compete successfully to earn a return on their investments, which in turn creates incentives for next year's capital expenditures. The Commission should not grant any of the relief that Skype seeks, which would effectively destroy the business models that carriers currently operate under, simply to allow Skype to provide bandwidth-intensive services on the carriers' networks free of charge. Skype just wants a free ride off the carriers' investments.

Third, Skype assumes that the wireless carriers have an endless amount of capacity on their networks, and that the wireless carriers are not constrained by spectrum. This erroneous assumption is most evident in Skype's argument that the limitations in the carriers' terms of service and in the features of devices sold for use on their networks are somehow "anti-consumer." Skype actually likens these limitations to the pretextual claims that the monopoly pre-divestiture AT&T made in 1968 to forestall competition. Skype Petition at Pages 14-19. In truth, wireless carriers have real constraints, both in terms of network capacity and underlying spectrum, even using the most spectrally efficient technologies. These constraints require that a carrier impose neutral limitations on each individual subscriber's use of the network so that he or she does not hog the network and bring down a whole sector or cell site. There is nothing improper at all about this, and it provides no basis for any of the relief requested by Skype.

Finally, Skype assumes that platforms for the development of wireless applications, such as BREW, invented by QUALCOMM, are not open, and Skype claims that BREW and Java are a "significant barrier" to application developers writing software for the mobile internet, thereby

² Eleventh Report at para. 124.

justifying its request that the Commission take the extraordinary step of creating some sort of “industry-led mechanism” to adopt technical standards for software platforms to ensure that they are “open,” as Skype defines that term. Skype Petition at 20. There is no statutory authority for the Commission to grant this relief—Skype does not even suggest a basis for such authority.

In any event, Skype’s allegations are wrong. Skype does not even explain what BREW is, why it was created, or how it works. BREW is an open software platform, which has enabled thousands of innovative software applications for cell phones to be written and brought to market. BREW has made it possible for consumers to enjoy applications ranging from ring tones to games to location-based services and more, in an easy to use downloadable format, without suffering any viruses or security issues. In so doing, BREW has enabled a deep worldwide ecosystem of developers, carriers, and device manufacturers. There is no basis for the FCC to act at all based upon Skype’s erroneous allegations about BREW.

Prior to the invention of BREW, a developer who wished to write an application for mobile phones had to write different software for each handset vendor and each handset model. This process made it literally impossible for native applications for cell phones to come to market. Developers needed a common platform, one that would support downloadable applications for cell phones. Device manufacturers also needed a common platform so that they did not have to pick and choose which applications each carrier wanted included on each device. Likewise, carriers had no way to verify that the applications were free of viruses and were entirely secure. If an application with a virus is downloaded into a mobile phone, the impact on consumers and carriers could be severe—entire cell sites could be brought down. So, carriers needed a way to verify that a downloadable application was free from viruses and secure, and they needed an easy to use platform that would allow applications to be launched on the wide

variety of devices that each carrier sells. BREW solved these problems. It provides an open development platform for software vendors to write applications, which can then go through a one-time testing process to become certified as secure and free from viruses. Indeed, there have not been any major security incidents on the BREW platform since its first deployment in 2001.

Applications based on BREW have proliferated at a rapid rate. Today, there are thousands of BREW-based applications available to be downloaded to mobile phones. These applications even include some that were written for other platforms, such as Java and Flash, which have been brought onto BREW. In all, BREW has been deployed by 69 carriers in 31 countries. There are 49 manufacturers who make BREW-capable phones.

QUALCOMM recently announced that publishers and developers have earned more than \$1 billion in proceeds from BREW applications and services. BREW has created a business model that has been successful for both carriers and developers. It is certainly true, but entirely proper, that developers do not get to free ride on wireless networks—in the BREW business model, developers share the proceeds of subscribers' payments for downloaded software with carriers and with QUALCOMM, which operates the BREW system. This business model has proven successful for all those involved—carriers, application developers, handset vendors, and QUALCOMM and all of its partners. Together, they have used BREW to develop and sell compelling applications used and enjoyed by millions of Americans and others around the world.

In sum, the Commission should not consider the radical regulatory changes suggested by Skype. BREW has dramatically expanded the mobile internet to the unquestionable benefit of American consumers. The Commission should decline to take any action with regard to BREW.

For all of these reasons, QUALCOMM respectfully requests that the Commission deny Skype's Petition in its entirety. .

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OPPOSITION OF QUALCOMM INCORPORATED

QUALCOMM Incorporated ("QUALCOMM"), by its attorneys, hereby submits its Opposition to the above-captioned Petition filed by Skype Communications, S.A.R.L. ("Skype"). Skype's Petition seeks three forms of relief: 1) a declaration by the Commission that it will enforce its 1968 Carterfone decision as to the wireless industry; 2) initiation of a proceeding by the Commission to evaluate wireless carrier practices in light of Carterfone; and, 3) creation of an industry-led mechanism to ensure what Skype calls the "openness of wireless networks." Skype Petition at Pg. ii. QUALCOMM shows herein that there is no basis for the Commission to consider or grant any of this relief, and, consequently, the Commission should deny Skype's Petition in its entirety.

I. Background

QUALCOMM is a world leader in developing innovative digital wireless communications technologies and enabling products and services based on the digital wireless communications technologies that it develops. QUALCOMM is the pioneer of the code division multiple access ("CDMA") technology, which is utilized in the 3G CDMA family of wireless

technologies. These technologies include CDMA2000 and WCDMA/HSPA, which are the two technologies used in third generation (“3G”) wireless networks and devices to enable consumers to enjoy advanced, high speed, and ubiquitous wireless services. QUALCOMM broadly licenses its technology to over 140 handset and infrastructure manufacturers around the world.

To date, there are 268 wireless carriers in 110 countries who have deployed one of the 3G CDMA technologies. Worldwide, there are over 441 million subscribers using a 3G CDMA device, and these devices are proliferating at a very rapid rate in the hotly competitive wireless markets around the world. In the last 12 months alone, 93 devices using 3G CDMA have been brought to market by 28 different device manufacturers.

Here in the United States, there is fierce competition among the carriers in the provision of 3G services, which has gone hand-in-hand with the rapid deployment and expansion of 3G CDMA networks. As a result, American consumers are enjoying the 3G services at ever-increasing rates. Moreover, as the Commission found in its Eleventh Report, U.S. carriers have deployed competing 3G technologies, which has only intensified the competition as the carriers seek to differentiate their networks by providing what each claims to be the best and most advanced high speed wireless network and by offering the most robust and compelling 3G services to consumers. Accordingly, Verizon Wireless, Sprint, ALLTEL, US Cellular, and Leap Wireless, among other carriers, have deployed the EV-DO high speed wireless technology, and their deployments are expanding. As of September 2006, approximately two-thirds of the U.S. population had access to EV-DO, and since then, the competing EV-DO networks have substantially expanded their footprints.³ As of March 31, 2007, over 23 million Verizon Wireless subscribers, more than 39 percent of that carrier’s retail customers, have an EV-DO

³ See Eleventh Report at Statement of Chairman Martin.

device. Indeed, Verizon Wireless and Sprint are now in the midst of rapidly upgrading their EV-DO networks to an advanced version of EV-DO, known as Revision A, which supports very high speed downloads and uploads.

On the other hand, Cingular Wireless has deployed the competing WCDMA/HSDPA technology, and it is expanding the footprint of its WCDMA/HSDPA network at a very rapid rate. Moreover, Cingular has announced its intention to upgrade its network to HSUPA, an advanced version of the HSPA technology, which also supports very high speed downloads and uploads. Moreover, both T-Mobile USA and Sprint provide high speed local area service via Wi-Fi (802.11) technology, and T-Mobile has announced its intention to deploy WCDMA on its recently purchased AWS spectrum as it becomes clear and available for deployment. In addition, the 3G CDMA technologies are now embedded in laptops sold by the major laptop vendors offering consumers another way to access mobile broadband services.

The carriers also compete fiercely in the provision of wireless services. As already noted, QUALCOMM invented BREW, a thin software middleware layer supported by an end-to-end system, which enables software developers seeking to write applications for downloading by subscribers into mobile phones; handset vendors to manufacture phones that support such downloads; and, carriers to offer a wide variety of applications to be downloaded. Since its inception, there have been over 1.5 billion applications downloaded through BREW. These applications run the gamut from games to ring tones to location based services to information and educational software programs optimized for use on mobile phones.

Developers who wish to write an application using BREW go through a simple process, which includes registration by the developer with Verisign and the purchase of digital notarizations to protect the developer's software code from theft. The process culminates in the

delivery by the developer of each of their applications to a third party testing facility, which conducts tests to ensure that the software is free of viruses, bugs, or anything that will cause a security problem when downloaded into a mobile phone over a wireless network and used. Once the application passes testing, it is certified for use, and the developer is free to sell its application to carriers who have deployed BREW. The carriers then sell the applications on a retail basis to subscribers.

Hundreds of developers of all sizes, ranging from large software companies to small, start ups, have completed this process and launched thousands of downloadable applications via BREW. As of last month, developers earned a total of over \$1 billion in proceeds from BREW-enabled applications sold by 69 carriers in 31 countries to their subscribers.⁴

With this brief background, we now turn to the mistaken fundamental assumptions which mar Skype's Petition.

II. Skype Ignores the Robust Competition in the U.S. Wireless Market, Which Is the Opposite of the Monopoly Telecommunications Market That the Commission Confronted in 1968 When It Decided Carterfone

Skype asks the Commission to extend Carterfone to the wireless industry and to initiate a proceeding to consider sweeping regulatory changes to curb what Skype alleges are anti-competitive practices, but Skype does not deal with the facts found by the Commission in its most recent report on the state of competition in the U.S. wireless market, which all show that the market is remarkably competitive and which demonstrate that there is no basis for the Commission to grant any of the relief requested by Skype. The facts found by the Commission demonstrate that the U.S. wireless industry in 2007 is the polar opposite of the telecommunications market in 1968 when the Commission adopted its Carterfone decision, and

⁴ See http://brew.qualcomm.com/jsp/brew/en/press_room/press_releases/2007/03_05_07.html.

on that basis alone, the Commission should not initiate a proceeding to consider applying Carterfone, a decision rendered as an antidote to the ills of a vertically integrated monopoly provider of local, long distance, and terminal equipment, to the fiercely competitive wireless market.

Each year, as required by Congress, the Commission renders a report on the state of competition in the U.S. wireless (commercial mobile radio) market. The Commission released its most recent report, the Eleventh Report, on September 29, 2006. The Commission summarized its findings in the Eleventh Report as follows:

In this report, the Commission concludes that there is effective competition in the CMRS marketplace. Among the indicators of market structure that support this conclusion, 98 percent of the total U.S. population lives in counties with access to three or more different operators offering mobile telephone service, slightly higher than in the previous year, and up from 88 percent in 2000, the first year for which statistics were kept. The percentage of the U.S. population living in counties with access to four or more different mobile telephone operators is also slightly higher than in the previous year.

Eleventh Report at para. 2. Indeed, the Commission found that the U.S. wireless market is less concentrated than in Western European markets, with the exception of the UK. *Id.* at para. 52.

After acknowledging the consolidation as a result of the Sprint-Nextel and Cingular-AT&T Wireless mergers, the Commission concluded that:

Nevertheless, although the mobile telephone market has become more concentrated as a result of these mergers, none of the remaining competitors has a dominant share of the market, and the market continues to behave and perform in a competitive manner.

Id. at para. 2. The Commission also found that despite consolidation, existing carriers continue to expand and enter new markets. *Id.* at para. 84.

Since the Eleventh Report was issued, the Commission completed the AWS-1 auction, the largest and most successful auction in the history of the Commission. One of the largest winners of the auctioned AWS spectrum is a new entrant whose voting stock is owned by cable

television operators, who have expressed interest in offering innovative services. The Commission itself stated that it expects that the AWS-1 auction will facilitate entry into local markets by existing carriers and possibly by new entrants. Id.

Later this year or early next year, the Commission will auction 60 MHz of spectrum in the 700 MHz band, prime spectrum for wireless carriers. A number of potential new entrants, including Skype itself, have participated in the proceedings at the Commission on the band plan and service rules to govern this important spectrum band. Contrary to the claims that Skype made in its Petition, the wireless market is robustly competitive and continuing to become more so. New entrants, such as Skype and others, are perfectly free to obtain spectrum through the Commission's auctions or otherwise and to operate under some new business model. The marketplace will determine whether the new entrants will succeed or fail. There is no need for the Commission to consider intervening in the wireless market and making radical changes in regulation which would mandate or forbid particular business models, given the highly competitive state of the market according to the Commission itself.

The Commission's conclusion that the wireless market is highly competitive is not limited to particular parts of the country. To the contrary, with respect to the state of competition in the wireless industry in rural areas, the Commission concluded as follows:

Based on our rollout analysis, information, and statements provided by commenters, and industry reports, we conclude that CMRS providers are competing effectively in rural areas. In addition, some analysts report that wireless competition is increasing in rural areas, particularly as a wireline substitute.

Id. at para. 88.

The Commission went on to state that:

We note that market structure is only a starting point for a broader analysis of the status of competition based on the totality of the circumstances, including the pattern of carrier conduct, consumer behavior, and market performance

more fully discussed below. Despite the smaller number of mobile operators in rural areas as compared to urban areas, there is no evidence in the record to indicate this structural difference has enabled carriers in rural areas to raise prices above competitive levels or to alter terms and conditions of service to the detriment of rural consumers. To the contrary, one analyst found that rural carriers are rolling out competitive national pricing plans with “surprisingly low per minute pricing.”

Id.

Skype’s Petition studiously avoids dealing with any of these findings by the Commission. Skype wants the Commission to ignore its own conclusions and to start a far reaching proceeding to consider sweeping regulatory changes on the basis of Skype’s unsupported claims of anti-competitive behavior. The Commission’s own annual report establishes that the wireless market is highly competitive, and, therefore, there is no basis for the Commission to start the proceeding requested by Skype.

In particular, with respect to the conduct of the nation’s wireless carriers, the allegations in Skype’s Petition are directly contradicted by these conclusions in the Commission’s Eleventh Report:

With respect to carrier conduct, the record indicates that competitive pressure continues to drive carriers to introduce innovative pricing plans and service offerings, and to match the pricing and service innovations introduced by rival carriers.

Id. at para. 3.

Indeed, the Commission noted that with respect to 3G, this competition is heightened by the fact that carriers have deployed different 3G technologies. As the Commission put it:

In addition, the deployment of next-generation networks based on competing technological standards continues to be an important dimension of non-price rivalry in the U.S. mobile telecommunications market.

Id.

The Commission went on to explain the basis for its conclusion as follows:

Theory and evidence suggest that allowing the use of multiple standards may have several advantages over standardization of wireless network technologies. Since the types of services tend to differ across technologies, use of multiple standards may result in greater product variety and greater differentiation of services offered by carriers using different technologies. Diversified and heterogeneous services make it more difficult for carriers to coordinate their behavior so as to restrict competition with regard to pricing. Other potential pro-competitive advantages of multiple standards include greater technological competition and greater price competition between operators using different technologies. In particular, competition between carriers using incompatible technologies tends to put pressure on carriers to achieve sufficiently high adoption of their technology in order to ensure that it survives the “standards war.” The pressure to fill their networks may lead carriers to enact price cuts and handset subsidies. Finally, the adoption of a particular standard may enable one carrier, or a subset of carriers, to gain a temporary competitive advantage over rival carriers, which may also tend to undermine the incentive and the ability of carriers to coordinate their conduct in such a way to restrict competition.

Id. at para. 102.

Indeed, the Commission noted the proliferation of the competing 3G network technologies. As of the date of issuance of the Eleventh Report, the Commission wrote that CDMA 1xRTT and/or EV-DO was launched in at least some portion of counties containing 283 million people, which is 99 percent of the U.S. population. Id. at para. 117. On the other hand, GPRS, EDGE, or WCDMA/HSDPA was launched in at least some portion of counties containing 269 million people, or 94 percent of the U.S. population. Id. Moreover, the Commission noted the plans of Sprint Nextel, Clearwire, and others to deploy networks employing mobile WiMAX technology. Id. at paras. 119-120.

Moreover, the Commission found that other factors, including most notably the ability and penchant of consumers to change wireless carriers, is another factor that establishes that the wireless market is intensely competitive. The Commission explained this conclusion as follows:

Consumers continue to pressure carriers to compete on price and other terms and conditions of service by freely switching providers in response to differences in the cost and quality of service. Monthly churn rates averaged about 1.5 to 3.0 percent per month in the past year. In addition, implementation of local number

portability (“LNP”) beginning in November 2003 has lowered consumer switching costs by enabling subscribers to keep their phone numbers when changing wireless subscribers.

Id. at para. 4.

The Commission also concluded that the prices themselves charged by mobile carriers show that the wireless market is highly competitive. The Commission summarized that conclusion in this way:

Evidence on mobile pricing trends remains somewhat mixed, with two different indicators of mobile pricing—revenue per minute and the cellular Consumer Price Index (“CPI”)—continuing to show a decline in the price of mobile telephone service, and a third indicator based on the consumption patterns of hypothetical users showing a slight increase in the cost of mobile phone service in 2005. Nevertheless, international comparisons indicate that mobile voice calls are still far less expensive on a per minute basis in the United States than in Western Europe and Japan.

Id. at para. 5.

In sum, after a thorough analysis, consuming some 93 single spaced pages, the Commission concluded in the Eleventh Report, the Commission concluded that indicators of mobile market performance, carrier conduct, and market structure all “show that competition in the mobile telecommunications markets is robust.” Id. at para. 214. Skype presents no basis for the Commission to second guess its findings, analyses, or its conclusions—indeed, in its Petition, Skype ignores all of the Commission’s findings, analyses, and conclusions. Moreover, Skype cannot contest the fact that the market for wireless phones and other devices in the United States is remarkably competitive. On a daily basis, new wireless phones or other devices, at all price points, are brought to market.

Boiled down to its essence, Skype wants the Commission to impose monopoly-type regulation on the ultra competitive wireless industry because, apparently, Skype is complaining wireless carriers will not let Skype use their networks for free to launch a bandwidth-intensive

service, which would strip capacity away from other paying subscribers. There is no anti-competitive conduct here, and there is certainly no reason for the Commission to impose monopoly-type regulation or to consider mandating or forbidding particular business models in this competitive market. The weight of the evidence establishes beyond any debate that the wireless market in the U.S. is indeed robustly competitive, as the Commission found, and on this basis alone, the Commission should deny Skype's Petition.

Furthermore, As QUALCOMM shows herein, the carriers have a legitimate interest in managing their networks to ensure they earn a fair return on their investments, which is necessary to incent future investments, and to ensure that particular users do not hog the limited capacity of these spectrally constrained networks.

III. Skype Ignores the Substantial Capital Expenditures Needed to Construct Competitive Wireless Networks, and the Incentives Needed to Encourage Carriers to Make Such Expenditures

Skype's Petition states, at page 4, that for many Americans, the wireless handset has become indispensable, but nowhere does Skype acknowledge the enormous, ongoing investments of capital made by wireless carriers in their networks, much less the carriers' need to earn a return on their investments or the carriers' need for a stable regulatory environment in which to operate their networks. As noted supra, in the Eleventh Report, the Commission cited an estimate that in 2005 alone, the U.S. wireless industry made \$25 billion in capital expenditures. Eleventh Report at para. 124. These expenditures are necessary for carriers to compete in a competitive market—to extend their coverage, to use the latest technology to enable the offering of new products and services, and to keep up with the competition. Skype pretends that these capital expenditures have been made for its benefit—according to Skype, now that the networks have been built, Skype and other software and device manufacturers

should enjoy unfettered access the networks at no charge, Skype suggests. And, Skype pretends that the carriers will continue to make these enormous expenditures even if the Commission considers and makes radical change to the carriers' business models, by regulatory fiat. The Commission should not follow Skype's dubious reasoning.

Wireless carriers, like all businesses, have to earn returns on their investments, both to repay their costs of capital, and so that they can access capital to fund future capital expenditures, which are necessary to keep pace in the competitive wireless market. In ruling on Skype's Petition, the Commission is not writing on a blank slate. Skype is effectively asking the Commission to destroy the carriers' business models, business models that the carriers have used since mobile telephony began in the United States in the early 1980's. There is not a single word in Skype's Petition explaining why the carriers would continue to invest billions of dollars to upgrade their networks if the Commission forces them to operate under the new business model preferred by Skype, a model in which third party service providers, such as Skype, can use the wireless networks to operate their services without paying anything to the carriers in return. Skype justifies the imposition of this new model solely under its principle of "openness," but never explains the impact on the public if the existing incentives for investment are destroyed, the result that Skype is effectively seeking.

The existing regulatory framework has worked, and continues to work, very well for the American public. As the Commission has verified, the competitive nature of the market is causing lower prices and better services. The carriers can earn a return on their investments, and so they have strong incentives to make the necessary investments to expand and improve their networks. It is highly doubtful those incentives would continue to operate as is, unabated, if the Commission considers or actually makes the radical regulatory changes proposed by Skype. The

Commission should continue to let the competitive market work and reject Skype's attempt to impose a new regulatory paradigm.

IV. Skype Wrongly Assumes That Wireless Networks Have Limitless Capacity and Wireless Carriers Have Limitless Spectrum

Skype alleges that the carriers are engaging in "illegitimate network management practices as an excuse for otherwise anti-consumer behavior." Skype Petition at Pgs. ii, 2. The network management to which Skype points are terms and conditions of service that restrict subscribers from running applications of their choosing or attaching devices as they please to the network. *Id.* at Pg. 2. However, these practices are not illegitimate, and Skype makes no real showing of illegitimacy. In attacking the wireless carriers, Skype never confronts the facts that wireless networks have limited capacity; carriers have limited spectrum on which to operate their networks; and, maintenance of the security of the networks is vitally important.

Skype labels the carriers' practices as "illegitimate," but never comes close to proving up that allegation. The truth is that wireless networks, even using the most spectrally efficient technology, do have limited capacity, and the carriers have limited spectrum with which to work. The Commission does not need to start a new proceeding to discover these basic facts. It is equally true that the capacity of wireless spectrum and the limited amount of spectrum do require that the carriers engage in prudent network management, contrary to Skype's complaints. One subscriber should not be allowed to hog a carrier's network, and the carriers should not face criticism or regulation for preventing such behavior, which ensures that all subscribers can enjoy the networks. Indeed, it would simply be irresponsible for a carrier to allow one subscribers to bring down a sector or a cell site, thereby preventing other subscribers from being able to use the network. Americans rely on their cell phones to an ever-increasing extent, and it is entirely appropriate for the carriers to protect the collective rights of their subscribers by limiting the

extent of use by any individual subscriber. The network management practices of which Skype complains are appropriate and provide no basis for Commission regulation.

V. Skype Ignores the Importance of Protecting the Security of Wireless Networks

The carriers have a legitimate interest in protecting the security of their networks, and as a result, the carriers have a legitimate need to verify the security of any device to be used on their networks. Indeed, it is important to the over 200 million Americans who use their wireless phones every day that the wireless networks remain secure and free from viruses. As already noted supra, a virus spread over a wireless network could cause severe problems for both untold numbers of subscribers, not to mention the long term performance of the network itself, jeopardizing tens if not hundreds of billions of dollars of investments. Each carrier have very legitimate reasons to take great care in verifying that a device model is secure for use on its network because a security breach or virus could be disastrous. This is another reason why the Commission should not consider granting the relief sought by Skype.

There is a good precedent for the types of harms that can ensue when third parties install equipment for use on wireless networks, without the involvement of the respective carriers. There are third parties who sell repeaters for use on wireless networks. These repeaters are being installed without the consent or involvement of the underlying carriers. The results of this are bad for the public. These unauthorized repeaters often cause interference problems, a matter that CTIA has brought to the Commission's attention. Similarly, there are cellular jammers, unauthorized devices which are designed to jam signals from wireless phones or base stations. These devices allow third parties unilaterally to prohibit the public from using their cell phones in given areas. Again, these devices, which are installed without any involvement from the

carriers, harm the public by allowing a third party to deny subscribers the right to use their phones. Skype's Petition actually encourages this kind of harmful behavior.

Likewise, Skype pays no attention to the fact that carriers would be unable to comply with a host of important Commission social mandate-type regulations, if carriers had to allow any device to operate on their networks. No carrier could ensure that it is fully compliant with the Commission's E911 and HAC mandates, just to name a few, mandates are premised on the carriers' continued operation under their present business model. The ability of carriers to deliver emergency alerts, the topic of the recently enacted WARN Act, would also be undermined. Skype is seeking radical relief that is not in the public interest.

VI. Skype's Complaints About BREW Are Meritless

Based upon allegations which are just wrong, Skype seeks to involve the Commission in the heretofore unregulated topic of the design of software platforms which enable wireless phone users to download software applications into their phones. Skype asks the Commission to create an industry-led mechanism to ensure the openness of BREW and Java. Skype does not explain what statutory authority it thinks the Commission has to become involved in any manner in the area of wireless software platforms or to create an industry-led mechanism (whatever that means) on this topic. In fact, the Commission has no authority to regulate wireless software platforms or to create an industry-led mechanism. On this basis alone, the Commission should reject this portion of Skype's Petition.

Even assuming arguendo that the Commission has the requisite statutory authority, it should not take any action whatsoever with respect to BREW. Skype's allegations that BREW is a closed platform and that BREW is a significant barrier to software developers seeking to write applications for the mobile internet lack any merit.

By way of background, before QUALCOMM invented BREW, a developer who wished to write an application for cell phones had to write different software for each handset vendor and each of that handset vendor's models. This process made it literally impossible for native applications for cell phones to come to market. No developer had the resources or the inclination to write hundreds if not thousands of versions of the same software application. Accordingly, software developers needed a common platform, one that would support downloadable applications for cell phones. Moreover, developers needed a mechanism to sell and earn revenues from the sale of applications to mobile phone users.

Device manufacturers faced a similar problem. They did not want to be in the business of deciding which software applications to include on their handsets. They understood that personalization is an important feature of cell phones. Handset vendors needed a way to build handsets that would support downloadable applications, which meant that they needed a common platform that would support the endless variety of such applications.

Likewise, carriers needed a software platform that would support downloadable applications and enable them, too, to sell and earn revenues from the sale of applications. Just as importantly, before QUALCOMM invented BREW, carriers had no way to verify that the applications were free of viruses and were entirely secure. If an application with a virus is downloaded into a mobile phone, the impact on consumers and carriers could be severe—entire cell sites could be brought down.

By inventing BREW, QUALCOMM provided a safe, secure, and reliable software platform to enable developers to write applications for cell phones, handset vendors to include the platform on their handsets, and carriers to sell the applications to their subscribers. The results have been an unqualified success for every part of the large ecosystem that has grown up

around BREW. There are now thousands of software applications built on BREW by dozens of developers, ranging from major software firms to small start ups.⁵ Developers have earned a total of over \$1 billion in proceeds from BREW applications.⁶ It is very simple for a developer to start writing applications on BREW. The process involves the acquisition of digital document identifications to protect the developer from theft and, then, third party testing of the applications to ensure that they are free from viruses and secure for downloading. There is nothing “closed” about this process.

Skype’s real complaint seems to be that BREW developers share the proceeds from the downloading of BREW-enabled applications with the carrier on whose network the download occurred and with QUALCOMM, the inventor of BREW. There is absolutely no reason for the Commission to give Skype any relief. Skype should not have any entitlement to sell applications or services on a carrier’s network without compensating the carrier. Likewise, Skype should not earn revenues by selling an application developed on a software platform invented by QUALCOMM or anyone else without compensating the inventor. Skype just wants the Commission to mandate that it can be a free rider, and there is no good reason whatsoever for the Commission to do so. BREW fulfills important functions by making it possible for a plethora of software applications to be made available to wireless subscribers, thereby driving revenues for developers, carriers, and QUALCOMM. Moreover, as even Skype concedes, there are competing software platforms, which are likewise geared to the mobile application market.

⁵ For a list of just some of the developers who have written applications based on BREW, see <http://brew.qualcomm.com/brew/en/developer/directory.html>.

⁶ See http://brew.qualcomm.com/jsp/brew/en/press_room/press_releases/2007/03_05_07.html.

Skype has not shown any legitimate reason why the Commission should attempt to regulate or involve itself in any way in the area of software platforms. The Commission should simply let the competitive market work.

VII. Conclusion

Wherefore, for the foregoing reasons, QUALCOMM respectfully requests that the Commission deny Skype's Petition in its entirety.

Respectfully submitted,

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Dated: April 30, 2007

Certificate of Service

I, Dean R. Brenner do hereby certify that on this 30th day of April, 2007, a copy of the foregoing "Opposition of QUALCOMM Incorporated" was sent by U.S. mail, postage prepaid, to:

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